

***Connecticut Career Ladder
Advisory Committee***

Three Year Strategic Plan

***Submitted to the
Connecticut General Assembly
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By

The Office for Workforce Competitiveness

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We would also like to thank the following individuals for their presentations before the Committee.

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1. Overview of Enabling Legislation

Public Act 03-142, An Act Concerning Career Ladder Programs was enacted in June 2003 establishing a Connecticut Career Ladder Advisory Committee to promote the creation of new career ladder programs and the enhancement of existing career ladder programs for occupations with projected workforce shortages. The Office of Workforce Competitiveness, in consultation with the Permanent Commission on the Status of Women, was charged with developing a three year plan for the creation or enhancement of career ladder programs for occupations in early childhood education, child care, health care or any other programs for occupations with projected workforce shortages for the next five years and to report to committees of the General Assembly having cognizance of matters related to higher education and employment advancement.

2. Committee's Membership and Activities

The Career Ladder Advisory Committee, chaired by the Office of Workforce Competitiveness and the Permanent Commission on the Status of Women, is comprised of required members including: the Commissioners of Education, Higher Education, Public Health and Labor or their designees as well as workforce development representatives including those with expertise on training for women as well as health care, early childhood education and information technology, employer representatives for these industries, and a labor market analyst from the Connecticut Department of Labor. Meetings were also attended regularly by legislators and other interested parties including experts from the industries and advocates for low wage workers.

The Committee began meeting in September 2003 and held five meetings by December 2003. The meetings consisted of presentations by labor market analysts, experts on workforce development in early childhood education, health care and information technology, and researchers on workforce issues in these industries. Meeting rosters and minutes were kept and presenters offered additional materials to supplement the information provided in the meetings.

3. Definition of Career Ladder

For the purpose of this legislation, career ladder means any continuum of education and training that leads to a credential, certificate, license or degree and results in career advancement or the potential to earn higher wages in an occupation with a projected workforce shortage.

4. Career Areas Explored

The Career Ladder Advisory Committee explored the areas of health care, early childhood education, and information technology. Experts in the fields were asked to make presentations outlining the current shortages in the industries, challenges to recruiting and retaining workers, and possible strategies for creating career ladders in these fields. Presenters drew upon years of experience in analyzing the labor market needs of employers in these areas as well as the education and training needs of possible workers. They offered information on models that had been proposed or implemented and the experiences of these initiatives. They provided valuable insights, offered a wealth of information and raised concerns as the Committee considered proposals for the three-year plan.

Health Care

Because of the acute shortage of workers in the nursing field, the Advisory Committee focused on the career path to becoming a nurse. Future discussions will address a broader range of health care professions including technical positions, emergency medical occupations and other allied health fields.

Overview of Shortages

The Connecticut Department of Labor (CTDOL) in its July 2003 report, *Connecticut Workforce Demands and the Implications for Education*, documented the current and anticipated workforce shortages in the health care industry. Projections indicate that the number of positions for registered nurses (RNs) will increase from 30,560 in 2000 to 36,740 in 2010—a 20% increase. Certified nurse's aide positions will increase from 23,640 to 27,890—an 18% increase over the 2000 to 2010 time period. Other health care occupations are expected to experience similar increases including Licensed Practical Nurses (LPNs) with a 14% increase (7,010 to 7,990), home health aides a 28% increase (8,410 to 10,760) and medical assistants a 45% increase (3,890 to 5,640).

According to graduation rates, Connecticut will be unable to produce enough qualified registered nurses. The state produced 863 RNs in 2002 compared to the 1,235 nursing positions to be filled. In its July 2002 report, *Projected Supply, Demand and Shortages of Registered Nurses: 2000-2020*, the Health Resources and Services Administration (HRSA) indicated that the anticipated shortage by 2020 is expected to reach 55%—the fifth most acute shortage in the country.

Pathways to Becoming a Nurse

There are many paths to becoming a registered nurse. An individual may sit for the National Council Licensure Examination (NCLEX) to obtain a registered nurse's license following completion of a diploma program, associates in science degree in nursing program, a bachelor of science degree in nursing program, or a component of an accelerated program (second degree) offered at colleges and universities.

Diploma: the Bridgeport Hospital School of Nursing is the only hospital-based nursing program in Connecticut. At the completion of this two-year program, graduates are eligible to sit for the NCLEX-RN. There is an option to complete an associate in science degree in nursing through a collaborative agreement between the hospital and Housatonic Community College. The credit award for the hospital diploma program is based on an assessment conducted by the New York State Board of Regents' National Program on non-collegiate sponsored instruction.

Associate in Science Degree in Nursing: This nursing program is two years long and there are six such programs offered at community and private colleges in Connecticut.

Baccalaureate Degree in Nursing: This nursing program is four years long and seven such programs exist in Connecticut; two are offered in the state university system, one at the University of Connecticut and the remaining at four private institutions.

Accelerated Program: These are programs in which students enter with a baccalaureate degree in an area other than nursing, become prepared to sit for the NCLEX, and obtain a baccalaureate or masters degree in nursing. Six colleges and universities, both public and private, offer this pathway in Connecticut.

Advancement Programs: There are also programs within the state for individuals who already have registered nurse licensure that support advancement from diploma to associate degree, associate to baccalaureate and then on to master's and doctorate degrees in nursing.

Licensed Practical Nurses (LPNs) can receive advanced placement into associate degree programs by enrolling in two transition courses. Once requirements are met, practical nurses can enter the third semester of the associate degree program. LPN programs are generally fifteen months long and offered in the vocational technical school system at eleven sites, as well as by one private institution offered at three sites.

Certified Nurse's Aide: Numerous training programs across the state prepare individuals to become nurse's aides. Currently these programs are not standardized and produce workers with different skills and abilities. However, individuals can choose to become "certified" by taking a state examination. In some instances, community colleges recognize experience as a nurse's aide as a plus for entry into a registered nurse program.

Challenges to Moving Workers along a Nursing Career Ladder

Insufficient Faculty

Connecticut, like many other states, has been marketing employment in the nursing field and the significant response has quickly overwhelmed the state's capacity to train and educate qualified students. The American Association of Colleges of Nursing reported that a 2003 survey found that more than 11,000 qualified students were turned away from baccalaureate nursing programs due to limited numbers of faculty, clinical sites and classroom space. This limited educational institution capacity to train RNs is a major obstacle in Connecticut to meeting the demand for trained nurses in the state.

Lack of Career Paths for Certified Nurses' Aides

One of the major obstacles to advancing in the health care field is the lack of career paths for nurse's aides to advance to LPN, RN or other allied health fields. Without standardized curricula, workers have difficulty moving from certification to degree. In addition, language and basic skills deficits translate into longer time to degree for returning students. In particular, deficiencies in math and science make advancing in the nursing field difficult if not impossible. Those enrolled in remediation and basic skill development before admission into nursing programs or those working and going to school part-time will have difficulty securing financial aid as most programs require full-time course work.

Low Wages in Entry Level Positions

Low wages are a deterrent for those interested in entry-level positions in health care. According to the Connecticut DOL, in 2003, home health aides earned an entry-level wage of \$9.74 and an hourly average wage of \$11.83 or \$24,611 annually for full time work. Nurse's aides earned a starting wage of \$10.65 and an average hourly wage of \$12.69 or \$26,396 for year round work. Using the Connecticut Self-Sufficiency Standard as a measure, nurse's aides and home health aides employed at the average hourly wage could not support a family without supplemental income.

High Turnover

Turnover and vacancy rates increase when workers are attracted to higher paying jobs and providers have difficulty competing for workers with those offering less physically and emotionally demanding low wage jobs. According to the American Health Care Association, 52,000 certified nurse assistant positions are vacant nationwide and turnover rates exceed 60% in 32 states. Many studies have found that economic conditions and the level of compensation influences whether individuals stay or leave their direct care jobs.

Possible Strategies

A number of different strategies should be considered in creating career paths to address the worker shortages in this area.

Initiatives to Increase Faculty

- Make efforts to fill Connecticut college and university nursing faculty positions that are vacant due to early retirement to address the shortage of current teachers.
- Work to make faculty pay comparable to practicing nurse pay to entice master's level nurses to enter teaching.
- Encourage and develop collaborations between hospitals and colleges to increase number of faculty. An example is Lawrence & Memorial Hospital's agreement to fund a five year faculty position at Three Rivers Community College, which will enable the school to expand its nursing class. Hartford Hospital will provide two masters-level RNs as teaching faculty in an evening nursing program to expand Capital Community College's enrollment in nursing.
- Explore the possibility of acquiring federal resources to support individuals pursuing masters and doctoral degrees in nursing who agree to teach. The Nurse Reinvestment Act of 2002, which is coordinated through the U.S. Department of Health and Human Services, offers a number of grant programs that support both individuals and educational institutions. These grant programs offer nursing scholarships and nurse faculty loans.
- Assist registered nurses entering at diploma, associate degree and baccalaureate level to complete bachelor's and master's degrees in nursing through individually designed course plans. Programs such as the one developed by the University of Connecticut School of Nursing in conjunction with Naugatuck Valley Community College and Western Connecticut State University can meet both the immediate staffing needs of local hospitals as well as future teaching needs of the state's colleges and universities.

Initiatives to Provide Training and Professional Development

- Explore the development of an Allied Health Academy, in collaboration with New England Health Care Union 1199's labor-management training model, that specializes in all levels and occupational areas of health care training. This Academy could coordinate the development of standardized curricula for health care occupations in collaboration with educational institutions, employers and unions, facilitate better utilization of current

teaching faculty, and link with the Nursing Career Center to organize recruitment and retention activities.

- Link and standardize certified nurse's aide curriculum and associate degree in nursing courses with articulation agreements with colleges and training programs so that workers can more easily transition into advanced degree programs and transport credits between providers. This linkage is particularly important for women who have transitioned from welfare to low-wage work in the health care field. Partner with Workforce Investment Boards to ensure that their contracted training providers include this standardized CNA curriculum in their programs.
- Clarify CNAs' job responsibilities and then create advanced/specialized nurse's aide positions with additional responsibility and expertise and higher wages. Provide ongoing professional development that offers continued education credit for nurse's aides on basic skills improvements, communication, problem solving and decision-making skills as well as new issues in the field.
- Consider implementation of a career ladder program similar to Massachusetts' Extended Care Career Ladder Initiative (ECCLI). The program is designed to both help direct care workers move upward within the health care field and also enrich long-term care by promoting an atmosphere of learning and high quality care among employees.
- Explore ways to secure federal resources for health care education. The Nurse Reinvestment Act of 2002, which is coordinated through the U.S. Department of Health and Human Services, offers a number of grant programs that support both individuals and educational institutions. These grant programs offer grants for building career ladders, enhancing patient care and nurse retention, and geriatric training. The federal Workforce Investment, Carl Perkins, Higher Education, and Temporary Assistance for Needy Family Acts could be leveraged to support this training as well.
- Pursue opportunity for Connecticut to participate in the "Building a Career Ladder in HealthCare" program funded by the U.S. Department of Labor, Employment and Training Administration. The program provides employees typically employed as nurse aide, foodservice, housekeeping, and environmental services positions with needed skills to move one rung up the job ladder at their hospital by fostering knowledge, confidence and motivation to enroll in certificate and degree programs offered at local community colleges and technical schools.
- Develop standardized preparatory English literacy, math and science programs that prepare students for the health care field that can be offered by colleges, high schools and private institutions to ease the transition to nursing programs. Explore multiple methods including on-the-job, tutorial, classroom and online training.
- Explore incumbent worker training models that provide current health care workers with academic and clinical coursework to upgrade their skills. Danbury Hospital's model for paying for training for its workers may offer one model for increasing the skills of entry-level workers. In addition, the Department of Labor and 1199's Training Fund are exploring the possibility of creating a CNA to LPN apprenticeship training program.

- Develop a middle and high school pathway using national curriculum standards such as the National Health Care Skills standards and connect this effort to the current Connecticut Career Choices program.
- Identify possible models for high school academies that focus on health care fields. For instance, the Healthcare Workforce Collaborative Career Ladder Structure in Sacramento has a charter school specifically for health care careers, providing prerequisite courses, in addition to classes that provide entry-level skills.
- Increase the state's ability to offer online courses to those interested in entering or returning to the nursing field. Currently the state offers refresher courses but could also consider providing preparatory or foundation courses for those interested in pursuing nursing degrees. The flexibility of these courses may assist students who are working full-time to begin the education process. At the same time, it might assist colleges in leveraging additional resources for nursing programs by offsetting costs for entry-level courses.
- Explore opportunities for students to co-enroll in two and four year institutions to promote greater attainment of higher degrees. For instance, Southern Connecticut State University and Gateway Community College Schools of Nursing are collaborating to enroll a diverse population of students in both institutions at the start of the educational experience. The program offers mentoring, study skill assistance, flexible course schedules and other provisions to help students succeed.

Initiatives to Provide Financial Aid and Work Supports

- Adequately fund a system of scholarships, grants and other forms of financial assistance to alleviate the financial hardships that can limit the professional development pursuits of the health care workforce including supports for part-time educational work as well as year round enrollment.
- Implement loan forgiveness programs in exchange for work as nurses or nurse faculty. Identify current federal and/or state programs that could include nurses in a loan repayment or forgiveness program.
- Provide an array of work supports to promote success in these fields including health insurance, childcare subsidies and transportation assistance. Provide incentives and subsidies to employers to offset costs associated with release time for staff professional development, certification fees, etc.
- Develop a mentoring program that provides valuable assistance to employees and fosters lower turnover.

Early Care and Education

The field of childcare and preschool education is now generally referred to as “early care and education”. This term encompasses the whole field, which is inclusive of care and education of children ages 0-8 and can occur in a variety of settings and program models such as homes, churches, profit and nonprofit centers, schools and companies. The Committee discussions focused on pre-school education. However, members are well aware of the interplay between pre-school and elementary school education and recognize that there are both commonalities and differences between the barriers to career ladders in these arenas.

Overview of Shortage of Qualified Early Care and Education Teachers

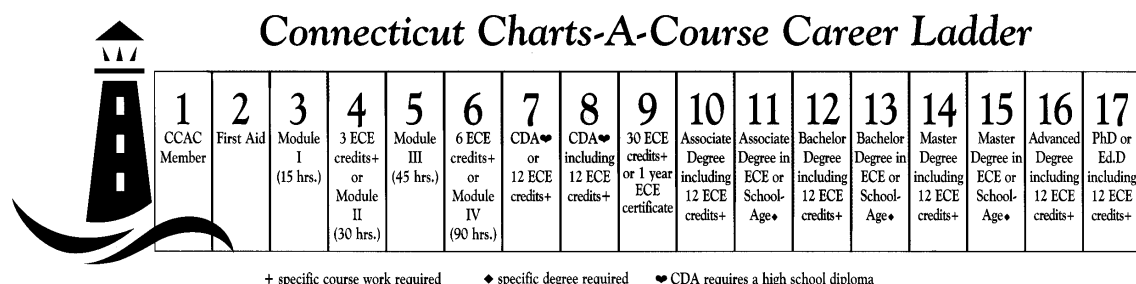
The childcare industry suffers from a shortage of qualified workers that is fueled by the interplay of how much parents are able to pay for the service, what programs can pay their staff given the fees they can charge, and the quality of staff who will work for those wages. As public programs and licensing regulations attempt to raise the bar on teacher qualifications and the quality of programming for young children, the industry struggles to maintain adequate numbers of staff.

According to a report issued by the Child Health and Development Institute of Connecticut (CHDI) in June 2003, there is no standardized, comprehensive method for estimating the size of the childcare workforce. Though the number of licensed facilities is known, the actual number of employees is not. CHDI cites reports that estimate the number of teaching staff and providers in licensed child care programs range from 14,500 to 20,310. Of these, group and family child care providers and their assistants constitute 3,310 individuals with the balance in centers. The size of the informal sector of paid childcare is unknown.

Further we do not have a comprehensive view of the level of education and training of these current workers. It is clear from providers, licensers and researchers that the general educational level of childcare teachers is below recommended standards of the National Association for the Education of Young Children.

Pathways of Professional Development in Early Care and Education

Connecticut Charts-A-Course, one the first national comprehensive models of career development, is the statewide system that supports career development and program improvement for early care and education. Introduced in 1991, CT Charts-A-Course works to increase the qualifications of the childcare workforce by recognizing an individual’s education or training on 17 levels of a career ladder. The CCAC Career Ladder represents various stages of professional development in early childhood education from no training to advanced degrees.



Individuals who work in early care and education may seek to acquire credentials and/or degrees in early childhood education. The following four major benchmarks from entry level through a college degree are incorporated in the CCAC career ladder.

Training Program in Child Development/Child Development Associate: This program is comprised of 180 hours of CCAC approved workshops delivered over 4 separate modules of training. This training is specifically designed to meet the needs of entry-level staff working in the field that are not yet ready to pursue college credit. The training program's curriculum and faculty is approved by CCAC and then administered by the Wheeler Clinic, Inc. This training can then lead an individual to apply for a Child Development Associate (CDA) credential; considered an entry-level credential awarded by the Council for Professional Recognition. In addition, Connecticut's community colleges offer the 12 credit CDA Training Preparation Programs as part of the Early Childhood Education Program. These credit-bearing programs can lead an individual to apply for a CDA and they simultaneously receive 12 credits in early childhood education.

Certificate in Early Childhood Education: Connecticut's community colleges offer a 30 credit planned program that lead to a certificate of training in early childhood education. These programs are designed to prepare individuals to work in the field of early care and education or who may already be employed and desire to improve their knowledge and competency in working with young children.

Associate Degree in Early Childhood Education: Connecticut community colleges and private colleges offer 60 credit planned program leading to an associate's degree in Early Childhood Education. These programs are designed for students who either plan to enter the field of early childhood education or who are already employed and desire to gain more knowledge and competency. Upon completion of the program, the student may consider transferring to a program that leads to a bachelor's degree with specialization related to early childhood education. Under the current Early Childhood Education Articulation Plan, certain associate degrees can transfer to some of Connecticut's four-year preparation institutions, which offer teacher certification with an endorsement in early childhood education.

Bachelor's Degree in Early Childhood with Teacher Certification: Four year colleges and universities offer undergraduate degrees in teacher certification with an early childhood endorsement in either birth through kindergarten or nursery through grade three. Undergraduate early childhood education certification programs are offered at Central CT State University, Connecticut College, Eastern CT State University, Mitchell College, Southern CT State University, St. Joseph College, University of Hartford and Yale University. Successful completion of the baccalaureate degree and passing Praxis II, leads to Early Childhood Teacher Certification awarded by the State Department of Education

Bachelor's Degree in Child Development or related areas: The University of Connecticut offers a baccalaureate degree in Human Development and Family that is a child development and early childhood study concentration, but it is not a teacher preparation program.

Charter Oak State College offers a baccalaureate degree program with a child studies concentration. Students can earn this degree by incorporating credit earned through multiple mechanisms, including traditional campus-based instruction and on-line course work,

standardized testing, distance learning from COSC and the evaluation of life experience. This is not a teacher preparation program and does not result in early childhood teacher certification.

Challenges to Moving Workers along an Early Childhood Career Ladder

Low Wages

Low wages for early care and education workers are a major deterrent for those interested in entry level and advanced positions in child care center or family day care. The Child Health and Development Institute of Connecticut (CHDI) determined the average hourly wage is \$10.56 or \$21,965 for a childcare center teacher. Using the Connecticut Self-Sufficiency Standard as a measure, no childcare center teacher employed at the average hourly wage could support a family without supplemental income.

Sixty one percent (61%) of directors of childcare centers make \$35,000 or less per year. Seventy one percent (71%) of family day care providers earn \$30,000 or less before their expenses are deducted. According to CHDI, although 74% of centers offered health insurance for their full-time employees, only 12% paid the full cost for their employees. Many child care workers are part-time employees and are therefore not eligible for these benefits.

Due to these low wages and limited benefits, workers have difficulty maintaining these positions. In addition, for many individuals the motivation to improve educational credentials is low since advances don't necessarily lead to wage increases and the social perception is that work in this field requires little special knowledge, skills or compensations beyond minimum wage. Studies show that skilled teachers are more likely to stay and improve their skills if they earn higher-than-average wages.

High Turnover

Turnover and vacancy rates increase when workers in child care centers and family day care homes are attracted to jobs either in a related or non-related fields that pay higher salaries and offer better employee benefits. Significantly, average starting salaries of schoolteachers in Connecticut public schools are \$30,466, making the migration of better-qualified childcare staff to school programs common. Turnover rates in Connecticut child care centers on average were 26% in 2000 with a range from 0% to 50%. The costs associated with high turnover are high for employers as well as young children. According to a 2001 study by the Connecticut Association for the Education of Young Children, it may cost a childcare program as much as \$1450 to replace a single staff person.

Barriers to Pursing Higher Education

Several federal initiatives have increased staff qualification requirements to include a CDA credential and associate and baccalaureate degrees in early childhood education. However, many workers in this field demonstrate limited basic skills. English language learners may not have the proficiency levels necessary to be successful in college-level courses and many others students lack the academic skills to pursue degrees. Moreover, there is little incentive to complete higher education because they do not often lead to better compensation in this field.

The path to higher education for a full-time staff is long and challenging. Language and basic skills deficits translate into longer time to degree completion for returning students. Many adults who work in the field of early care and education face the barrier of trying to work and maintain their families while simultaneously pursuing higher education goals. Transportation and child care issues and time limitations can also make class attendance problematic. The National

Center for Early Development and Learning (NECDL 2003) estimates that individuals take 5-7 years to complete a two year degree from a community college.

In addition, higher education institutions, which offer teacher preparation programs, often do not meet the needs of the non-traditional student. Some college early childhood education teacher preparation programs are cumbersome to access and enroll in and lack the flexibility that is required to meet the personal and academic needs of students who work full-time in early care and education settings.

Licensing Requirements

In Connecticut, all centers, group homes and family child care homes are regulated by the Department of Public Health (DPH), which reviews and approves the license for the center or home, but not individual employees. Some school-based programs and religious institutions are exempt from licensing. A paid informal childcare sector also exists that operates outside of licensing.

State regulations have such minimal professional development requirements that there is no incentive or sanction to motivate staff to pursue higher education. Most children in licensed child care are cared for in center-based programs and the regulations only require that a single head teacher in a center be 20 years of age or older and meet an experience and training level of a high school diploma, 1080 hours of supervised experience, and a CDA credential or 12 credits in early childhood education or child development. A second adult must be 18 and have a high school diploma. All other staff must be at least 16 years of age, but have no educational requirements. Regulation requires that program staff receive one percent of the total annual hours work in continuing education. Currently, there is no requirement for continuing education for family day care home providers. [Statutes and Regulations for licensing Child Day Care Centers, Group day Care Homes (April 29, 2002) and Family Day Care homes (December 2001). State of Connecticut Department of Public Health, Division of Community Based Regulation, Child Day Care Licensing Program.]

Both the State School Readiness Program and the federal and state Head Start programs require teachers to meet substantially higher standards of education. Teachers in programs receiving those grants are upgrading their qualifications to meet those standards.

Possible Strategies

Initiatives to Increase the Supply of Trained Early Care and Education Teachers

- Develop a reliable, standardized data system for tracking the number of employees in this field and their qualifications.
- Establish a plan for moving early care and education teachers through the CCAC Career Ladder with targets, strategies and funded programs to meet those targets.
- Ensure ongoing training and professional development opportunities for childcare professionals including providing subsidies to centers to offset tuition costs for college credit-bearing courses.
- Enhance opportunities for basic skills training so that childcare workers can enhance their skills and ease the transition to higher education programs.

- Review and amend the current Child Day Care Licensing Regulations as they relate to staff qualifications and professional development in order to better align it with current research and national recommendations for quality.
- Investigate an “Individual Licensing System” for childcare teachers similar to those of other professions in that individuals are licensed, credentialed or certified in order to work.
- Conduct outreach to current “kith and kin” providers to encourage their enrollment in early care and education training.
- Offer apprenticeship programs in early childhood education that promote acquisition of childcare certificates with corresponding wage increases for successful apprentices. The State Departments of Labor and Social Services have successfully implemented such a program with New Opportunities for Waterbury.

Initiatives to Increase the Supply of Certified Early Childhood Education Teachers

- Create an alternative pathway to prepare baccalaureate degree graduates who have the appropriate educational background to obtain initial early childhood teacher certification.
- Provide an accelerated pathway to cross endorsement in teacher certification so that an early childhood endorsement is available rapidly for teachers who are currently certified in elementary education and want to pursue specialized training in early childhood.
- Develop a middle and high school pathway using national curriculum standards and connect this effort to the current Connecticut Career Choices program.
- Strengthen the current Early Childhood Education Articulation Plan by reviewing the procedures and requirements for undergraduate admissions to the Early Childhood Teacher Preparation Programs in order to establish mechanisms for better access and smoother transitions for the community college graduates, non-traditional and part-time students.
- Investigate the development of a “Teacher Investment Program” similar to models used in North Carolina and Washington State, which require government subsidies and other resources to childcare employers who would offer release time for workers to pursue educational degrees, and incentives to educational institutions with flexible schedules and coursework leading to degrees in early childhood education.
- Work with the State Departments of Education, Social Services and Public Health to include plans to track and meet the demands of the School Readiness, state-funded centers and Head Start programs as they raise their staffing standards and expand their programs. Identify the data system needs to implement and monitor such a plan.
- Work with the State Department of Education to investigate the feasibility of state-sponsored universal pre-kindergarten programs.

Initiatives to Provide Financial Aid and Work Supports

- Implement HB 6931 (2001) [Section 17b-733 Connecticut General Statutes], “An Act Concerning Education and Equitable Wages for Early Childhood Education Professionals”, which calls on the Department of Social Services to develop within available funds, initiatives to increase compensation paid to child day care providers for educational opportunities through various initiatives and to evaluate the effectiveness of these initiatives upon retention rates.
- Investigate the North Carolina’s Child Care WAGE\$ Project and the Washington State Wage Ladder as possible models for compensation tied to training and career ladder advancement. The WAGE\$ Project sponsors salary supplements to childcare teachers, directors and family child care providers as they progress through the career ladder. The Washington State Wage Program establishes wage minimums for childcare teachers based on different level of education and experience.
- Adequately fund a system of scholarships, grants and other forms of financial assistance to alleviate the financial hardships that can limit the professional development pursuits of the early care and education workforce including supports for part-time educational work as well as year round enrollment.
- Explore possible loan forgiveness programs in exchange for work as early care and education teachers.
- Provide an array of work supports to promote success in these fields including health insurance, childcare subsidies and transportation assistance. Provide incentives and subsidies to employers to offset costs associated with release time for staff professional development, certification fees, etc.
- Develop a mentoring program that provides valuable assistance to employees and fosters lower turnover.
- Investigate funding mechanisms for providing state-sponsored health insurance for childcare workers. Rhode Island offers fully paid health insurance to family child care providers and partially paid insurance to staff in centers through the state health care insurance program for the uninsured. Through the North Carolina T.E.A.C.H. Early Childhood Health Insurance Program, childcare providers can receive insurance if they are enrolled in the T.E.A.C.H. program or if they have earned an associates or bachelor’s degree in child development or early childhood education.
- Explore tax credits for employers and employees including refundable child care credits and state EITC as well as employer-administered flexible spending plans.
- Increase the state’s childcare subsidies and reimbursement rates to offset personnel costs at family and center providers and increase grants to state-funded childcare centers.
- Identify possible creation or expansion of employer-based childcare opportunities (Pfizer, Adriaen’s Landing and other collaboratives)

Information Technology

(Information for this section is taken from the report, “An Information Technology Workforce Strategy for the State of Connecticut” prepared by Battelle Memorial Institute in January 2001 for the Connecticut Employment and Training Commission)

Overview of Shortages

Today, 12% of Connecticut’s workforce is employed in scientific, engineering and computer occupations. Over the next 10 years, scientific, engineering, computer science and skilled health care occupations are forecasted to grow by 44,000 jobs or 29% of all estimated new jobs created in Connecticut. The state has enjoyed robust growth in overall scientific graduates with information technology graduation rates gaining 132% from 1998 to 2002. However, engineering, biological and physical sciences have seen declines in graduates over that same time period. Estimates indicate that the annual gap in meeting the demand for technology workers will persist given the current level of graduates.

Challenges to Moving Workers along an IT Career Path

A number of challenges to recruiting and training the IT workforce were outlined in the Battelle report and the CT Career Ladders Advisory Committee meetings, including:

- Companies in the state are unable to recruit young, talented IT workers.
- Availability of experienced, highly skilled workers is a problem.
- Disconnects exist between industry and higher education in meeting industry workforce needs.
- Skill shortfalls and difficulty of recruiting workers to Connecticut are beginning to lead some firms to consider expansion and shifting of IT functions to other states.
- Older workers are less familiar with technology and need specialized training to pursue IT careers.
- Basic skills and language deficiencies limit workers’ ability to move into the IT workforce.

Possible Strategies

To be a leader in generating and sustaining a hands-on, well-rounded, and highly skilled information technology workforce, Connecticut must implement these five critical strategies (5Rs for Connecticut IT Workforce Development) concurrently:

1. Reinforce and replenish the key industry drivers by building on existing efforts to foster e-business cluster development across the state. Connecticut’s IT producing industries, encompassing software, computer services, Internet, electronics, and telecommunications industries, are just beginning to emerge as a leading national sector with strong growth in recent years. The state’s business environment needs to continue to support and foster startup and growing IT-producing companies as a key strategy for retaining and attracting IT workers to Connecticut. Moreover, industry needs to be an integral partner in guiding and participating in IT workforce development to turn Connecticut’s strong base of educational institutions into a competitive advantage in IT industry development.

2. Regain and recruit IT workers by improving the image of Connecticut as a leading state in e-business opportunities. Despite Connecticut's strong concentration of IT workers, the state lacks a defined image in IT. This is largely due to the embedded nature of IT activities in the state based in insurance and manufacturing industries. Efforts to brand and promote Connecticut's strengths in e-business, through both the emergence of "bricks and clicks" businesses in traditional insurance and manufacturing and in emerging IT-producing firms, is critical.

3. Retool the existing workforce by addressing career development needs through programs that help workers make the transition to IT careers and efforts to upgrade skills. Every worker's potential needs to be fully developed, especially in Connecticut where labor force growth is slow. Workers must be given more options for entering and developing IT careers. This long-term career development perspective has not been widely embraced by companies employing IT workers given their short-term orientation in addressing immediate, specific skill needs. Many of the state's Workforce Investment Boards have secured federal funding to offer these critical programs.

4. Retro-fit the educational pipeline to provide real-world experiences and achieve a more well-rounded technical workforce by strengthening industry involvement in educating and training information technology students. Connecticut lacks strong connections between industry and higher education in IT fields. To address this issue requires not only improving the student's education to give more real-world experiences and a better rounded education, but also creating new connections so that businesses will tap Connecticut graduates for new job positions. Programs such as the College of Technology and the Connecticut Career Choices are vital to this effort.

5. Ramp-up the educational pipeline to increase the generation of an IT-ready workforce across all levels of the education system. During the 1990s, Connecticut recorded substantial declines in students majoring in IT-related fields across both community colleges and 4-year institutions. The State, and its broad array of higher education institutions, is hard at work to reverse these trends and continued efforts are needed starting at the K-12 level. The curriculum and experiential learning activities that are taking place in the Connecticut Career Choices pilot sites clearly support this goal.

In order to support these efforts, the Battelle report suggests the creation of a Digital Strategic Fund to use discretionary funding to strengthen program efforts to further connections between industry groups and specific educational and training institutions.

5. Necessary Partners for Successful Career Ladder Programs

This process clearly demonstrated the need for a strong partnership between government, educational institutions and providers, employers and workers in order to develop and maintain career paths in these fields. Many of the necessary partners had been brought together as part of the Committee and their ongoing role will be critical to any career model programs. The Commissioners of the participating state agencies demonstrated their commitment to this issue in their attendance at meetings and their willingness to share information and strategize on new ways of providing education and training that address these labor shortages. Support from experts in these areas is also critical to long-term success of any program. Researchers and advocates can provide valuable feedback on how the programs are working and what changes are necessary to maximize our efforts.

Workforce development experts are also critical to this effort. Although not members of the committee, Workforce Investment Board staff made presentations and attended meetings to share their expertise and offer ways to use their resources to leverage more education and training opportunities. Adult education policymakers and providers were not part of these discussions and should be included in any future efforts to address the basic skills needs of workers in these areas. Training providers and representatives of employers in these fields are possibly the most important participants in this effort. Without support from employers, workers will be left to their own resources to acquire further education and training in order to pursue possible career paths.

6. Next Steps/Three Year Plan

Although this process yielded a wealth of information, the Committee anticipates a great deal more work over the next three years in order to create and expand career paths in health care, early care and education, and information technology. In particular, the Committee will work to engage employers, professional associations and workforce development entities in this effort. The Office of Workforce Competitiveness will continue its coordinating role.

Beginning in February 2004, the Committee will break into subcommittees of experts and interested parties in each field to continue the planning process. These committees will meet bi-monthly and be chaired by a member of the Career Ladder Advisory Committee. The full Advisory Committee will meet semi-annually to hear reports of the subcommittees and recommend next steps in the process.

Presentations will be made to the Connecticut Employment and Training Commission and other interested groups to share the results of this effort and recommendations for the next three years. Efforts will also be made to integrate the career paths program strategies into the state's plans for the Workforce Investment Act, Carl Perkins Act, Higher Education Act, and Temporary Assistance for Needy Family Act. In addition, committee members will analyze other state and federal legislation that may impact workforce development in these areas.

Informational hearings will be held to share the plan and to provide the testimony of experts in the field including employers and workers. Meetings will be held with key legislators and policymakers to secure their support of model programs in year two of the plan.

In year one, the subcommittees will meet to further discuss and investigate the strategies outlined in this report in an effort to identify possible models for implementation or expansion in Connecticut. They will convene employers and representatives of professional associations in these targeted fields to identify the career steps in their industries, solicit their feedback on possible strategies, and obtain their support of, and involvement in, proposed career path programs. Site visits and/or meetings will be held with current model programs that offer career paths or work supports.

In addition, the subcommittees will investigate possible funding options for career path programs including grant research. In particular, the committee will work to identify funding for work supports such as health insurance, childcare and transportation. Whenever possible, a variety of partners will be engaged to solicit any private or public funding.

By September 2004, each subcommittee will submit a set of recommendations to the full Advisory Committee outlining recommended models or model strategies and specifications for a Request for Proposals (RFP). The full Committee will review all recommended models or strategies to be tested and the budgets for these initiatives. The Office of Workforce Competitiveness will work with the Committee to prepare a plan to request and secure state and federal funding for pilot projects.

In year two, the Committee will then solicit the development or enhancement of career ladder programs through a competitive process. The Office of Workforce Competitiveness will issue an RFP and oversee the selection and implementation of these model programs. Each model will be required to outline its program specifically to aid in replication. This documentation will include recruitment and outreach strategies, skill requirements for entry into the programs, training curriculum, retention activities, performance outcomes, etc. An evaluation will be conducted to document best practices, assist in identifying problem areas, and offer improvements for future replication.

The goal in year three will be to bring pilot programs to scale or to test new models or strategies. Based on the evaluation of the year two pilot programs, the Committee will support replication of successful models in new areas of the state, with new audiences or expansion to include additional employers or workers.